

**REMARKS**

Upon entry of this amendment, claims 11-21 are pending. By the present amendment, claims 1-10 have been canceled without prejudice, and new claims 11-21 have been added. Favorable reconsideration of the application is respectfully requested.

The rejection of claims 1-10 under 35 U.S.C. § 102(b) over Okumura et al. (U.S. Patent No. 5,889,351, hereinafter "Okumura") or Rudkin (U.S. Patent No. 4,922,745, hereinafter "Rudkin") is respectfully traversed. Without acquiescing in the rejection, claims 1-10 have been canceled without prejudice or disclaimer as to the subject matter contained therein. New claims 11-21 have been added. Accordingly, the rejection with respect to claims 1-10 is moot. However, the cited art will be discussed with respect to specifically recited features appearing in the newly added claims.

Okumura is directed to a device for measuring viscosity and characteristics of a fluid. Okumura discloses a viscosity measuring device that is equipped with a piezoelectric vibrator, an oscillator and a loss factor monitoring means. Okumura does not disclose or suggest a two-beam system. Instead, there is a single vibrating plate 20 which is clamped along its edges and has an elongate piezoelectric transducer that extends along most of the length of the plate. Moreover, it does not appear that the structure of Okumura has two vibrational modes; the modal shape does not vary according to the stiffness of a connecting element; and there is no transducer that can provide an indication of a change in the modal shape of the resonant vibration. For at

least these reasons, it is respectfully submitted that Okumura does not disclose, teach or suggest each and every element specifically recited in the claimed invention.

Rudkin is directed to a fluid transducer for measuring a parameter of a fluid, such as a density or viscosity. The transducer includes two generally parallel tines extending from a common yoke forming a tuning fork adapted to be immersed in the fluid. Thus, Rudkin discloses a sensor of the familiar tuning fork type in which two tines are connected at a single location by only a yoke that constitutes or connects the bases of the tines. The structure of Rudkin will not have a modal shape resembling that of the claimed invention, and there is no structure disclosed in Rudkin which corresponds to the presently claimed structure. Moreover, there is no teaching or suggestion in Rudkin of any transducer that can measure variation in the modal shape.

In completed contrast to both Okumura and Rudkin, the claimed invention specifically recites a mechanical resonator comprising two parallel beams and a connecting element having a stiffness that determines the modal shape of resonant vibration of the resonator and a transducer that measures variation of the modal shape. As set forth above, there is no teaching or suggestion in either Okumura or Rudkin of these specifically recited features.

It is axiomatic that in order for a reference to anticipate a claim, the reference must disclose, teach or suggest each and every feature of the claimed invention. As set forth above, neither Okumura nor Rudkin disclose, teach or suggest each and every feature of the claimed invention. For example, neither of the references disclose, teach or suggest

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the claimed connecting element having a stiffness that determines the modal shape of resonant vibration of the resonator or a transducer that measures variation of the modal shape. Therefore, neither Okumura nor Rudkin anticipate the claimed invention. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

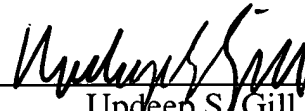
In view of the foregoing, it is respectfully submitted that the entire application is in condition for allowance. Favorable reconsideration of the application and prompt allowance of the claims are earnestly solicited.

Should the Examiner deem that further issues require resolution prior to allowance, the Examiner is invited to contact the undersigned attorney of record at the telephone number set forth below.

Respectfully submitted,

**NIXON & VANDERHYE P.C.**

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